a.

2013 Kincaid Lake Aquatic Vegetation Control Plan

LDWF, Inland Fisheries

Located in Rapides Parish
Map in Appendix II

1. Waterbody type - Impounded wooded tributary
2. Age and condition of control structure – It was completed in 1972. The overall condition of the dam is satisfactory. (DOTD inspection dated 2011)

   The following maintenance issues are noted:
   1. Transverse joints in the bottom of the spillway seem to have a slight vertical movement, evidenced by the water turbulence over the joints. During a non-overflow period, the concrete bottom to the spillway is to be tested to determine if there are voids beneath the slabs.
   2. Warning buoys and signs are to be installed in the approach to the spillway.
   3. The water-stop in the vertical eastern training wall joint is cracked. In joints where the water-stop is cracked, the joint is to be sealed or made to be impervious.
   4. The bottom of the outflow pipes for the catch basins are deteriorated and are to be replaced.
   5. The handrails on the spillway wing walls are rusted and broken and are to be repaired or replaced.
   6. There is a 2-foot high beaver dam across the diversion channel at, or around, Station 38+00 that is to be removed.
   7. There is brush growing on the northwestern training wall to the spillway that is to be cut and cleared.
   8. There is brush growing in the rip-rap around the drawdown/irrigation discharge that is to be cut or removed.
   9. To reduce 4-wheeler damage to the embankment slopes, it is recommended that signs be installed on the embankment advising "No Unauthorized Motor Vehicles Allowed. Violators Will Be Prosecuted."

3. Type of control structure – SEE APPENDIX I

   The earthen embankment is 5,200 feet long with a crown of 16 feet wide at an elevation of 105.3 feet MSL. The spillway is 100 feet long with a crest elevation of 94.7 feet MSL. The earth fill embankment has soil-cement shoreline protection.
   Dam Height is 36 feet.
   Structure height is 42 feet.
   Hydraulic height is 36 feet.
   Maximum discharge is 23,510 cubic feet/second. Maximum storage is 45,250 acre-feet.
   Normal storage is 25,000 acre-feet.
   Surface area is 1,920 acres.
   Drainage area is 35 square miles.

4. Water level (MSL)- 94.7 MSL
5. Surface area at 94.7 MSL – 1915 Acres
6. Average depth – 9 ft ; 22 ft Max
7. Watershed ratio – 12.9 : 1
8. Drawdown potential of structure – Drawdown potential is at least 12.0 feet

9. Waterbody Board or Lake Commission -
   a. Owned by the Rapides Parish Police Jury (RPPJ)

      The RPPJ, through interagency agreement with the Soil Conservation Service, is responsible for the maintenance and operation of the impoundment. The Police Jury has established a dedicated irrigation pool drawdown to 82.3 MSL if needed to meet agricultural needs by route of Bayou Boeuf.

   b. Primary contact information- Rapides Parish Police Jury
      P.O. Box 792
      Alexandria, LA. 71301

   c. Procedure for spillway openings – spillway opening is on an as-needed basis for irrigation. Gate opening is handled by RPPJ personnel. Openings at the request of LDWF for habitat or fisheries purposes must be presented to, and be approved by RPPJ.

DRAWDOWN HISTORY				
Date Opened	Date Closed	Purpose	Results	Issues
Sept 16,1991	Oct 16, 1991	Bank stabilization	unknown	
Sept 5, 2000	Jan 15, 2001	Veg. control	excellent	

What significant stakeholders use the lake?

Agricultural irrigation receives the first priority for water and the Rapides Parish Police Jury, through interagency agreement with the Soil Conservation Service, is responsible for the maintenance and operation of the impoundment. The Police Jury has established a dedicated irrigation pool drawdown to 82.3 MSL if needed to meet agricultural needs by route of Bayou Boeuf.

Much of the lake is surrounded by Kisatchie National Forest property. However, several areas have been extensively developed with effluent subdivisions. Property owners utilize the lake for recreational boating and fishing.

A minimal amount of duck hunting occurs on the lake.

What are their needs and concerns? What is the history of aquatic vegetation complaints?
Hydrilla was first reported in 1994. Prior vegetation complaints were minimal. A 1999 survey discovered an abundance of hydrilla and complaints became more numerous. A drawdown in 2000 eliminated the hydrilla. Since that time, vegetation complaints have been non-existent.

Have there been any controversial issues on the lake?
There have been no controversial issues on the lake.

Aquatic Vegetation Status:

As of July 2011 there was no problem vegetation. The plant coverage and diversity in Kincaid Lake has been consistent for many years and has never caused any access or habitat issues.

The lake has less than 5 % coverage of native submergent vegetation that occurs in shallow water areas, and a fringe of emergent vegetation that occurs along much of the shoreline. The submergent vegetation species include fanwort, southern naiad, and chara. Combined coverage for all submergent species is less than 100 acres. Emergent vegetation occurs in a narrow fringe along the shoreline and in the extreme back portions of the arms. Emergent vegetation includes white water lily, alligator weed, and panicum. Coverage of these species is less than 75 acres.

Vegetation coverage for 2013 is expected to be similar to the estimates above.

Limitations:

- Water is used for irrigation
- Use of drawdowns may be limited because it reduces water for irrigation.
- 2,4-D waiver area
- All management decisions presented by LDWF must be presented to the RPPJ before implementation.

Past Control Measures

No herbicide applications have been conducted on the lake.

An 8 foot drawdown for hydrilla control was conducted from September 2000 thru January 2001. Prior to the drawdown, hydrilla coverage was estimated between 400 and 500 acres. The drawdown completely eradicated the hydrilla. Hydrilla has not been observed in the lake since the drawdown.

No other recent plant control efforts have occurred and no changes have been considered.

Recommendations:

Annual surveys are scheduled to document aquatic vegetation coverage (type maps). These surveys will be conducted in July or August. Aquatic technicians will also report significant changes in the status of aquatic vegetation following days of spraying activity.

LDWF spray crews will spray emergent vegetation if necessary with glyphosate or diquat and an approved surfactant. These herbicides will be applied at the rate of 0.75 gallons per acre with the surfactant applied at 0.25 gallons per acre.

No specific management recommendations are needed at this time.

Appendix I.

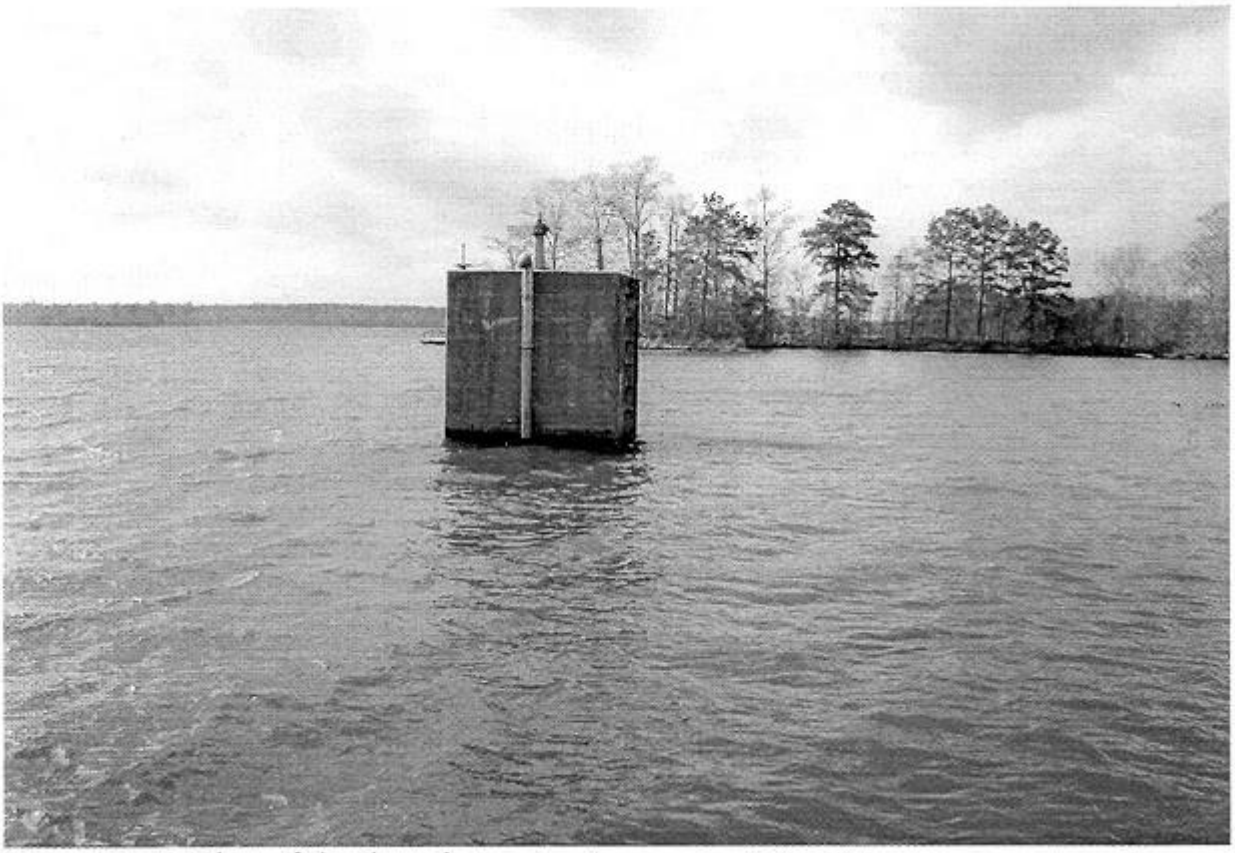


Photo No. 8: View of the drawdown structure.

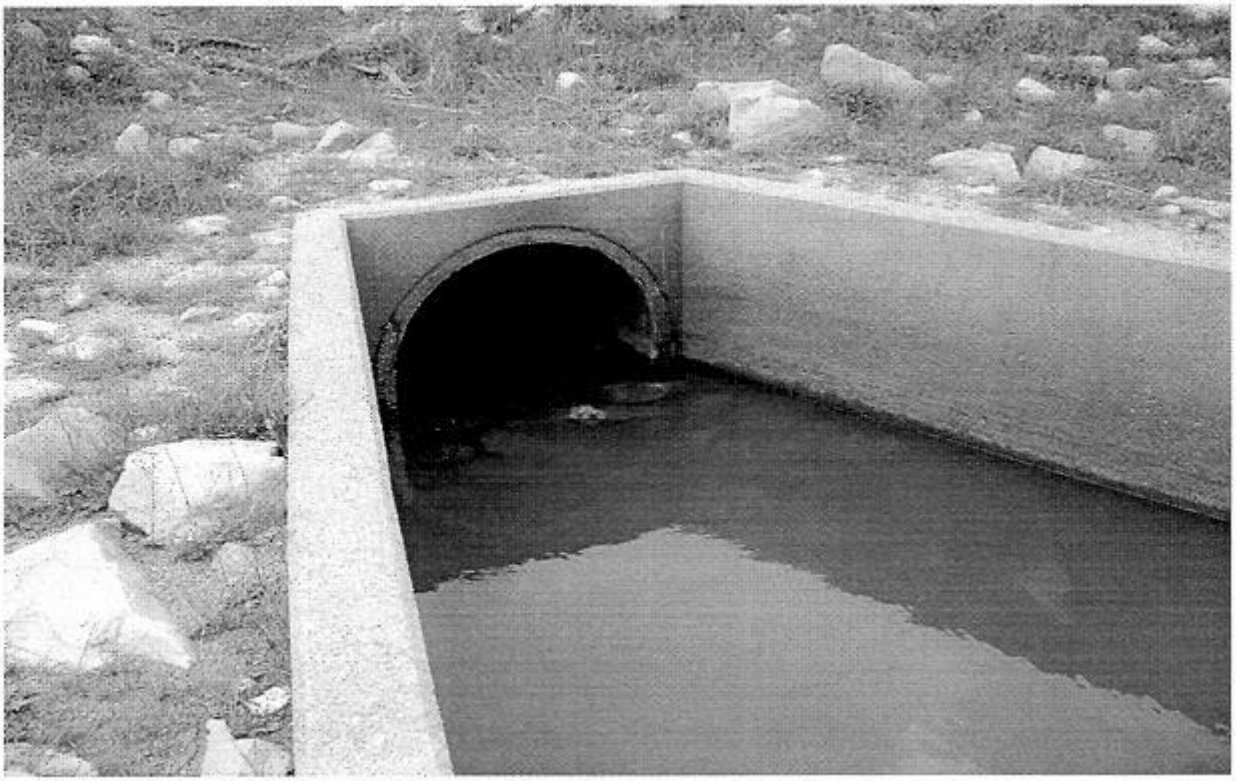


Photo No. 9: View of the discharge structure.

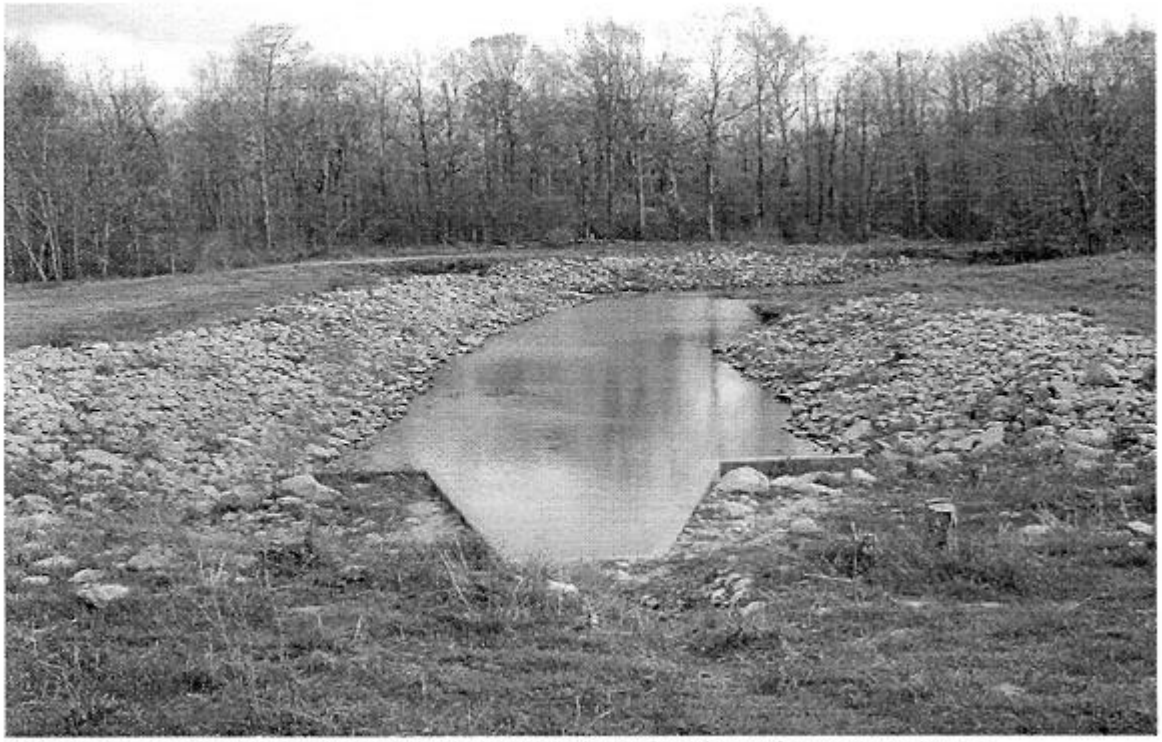
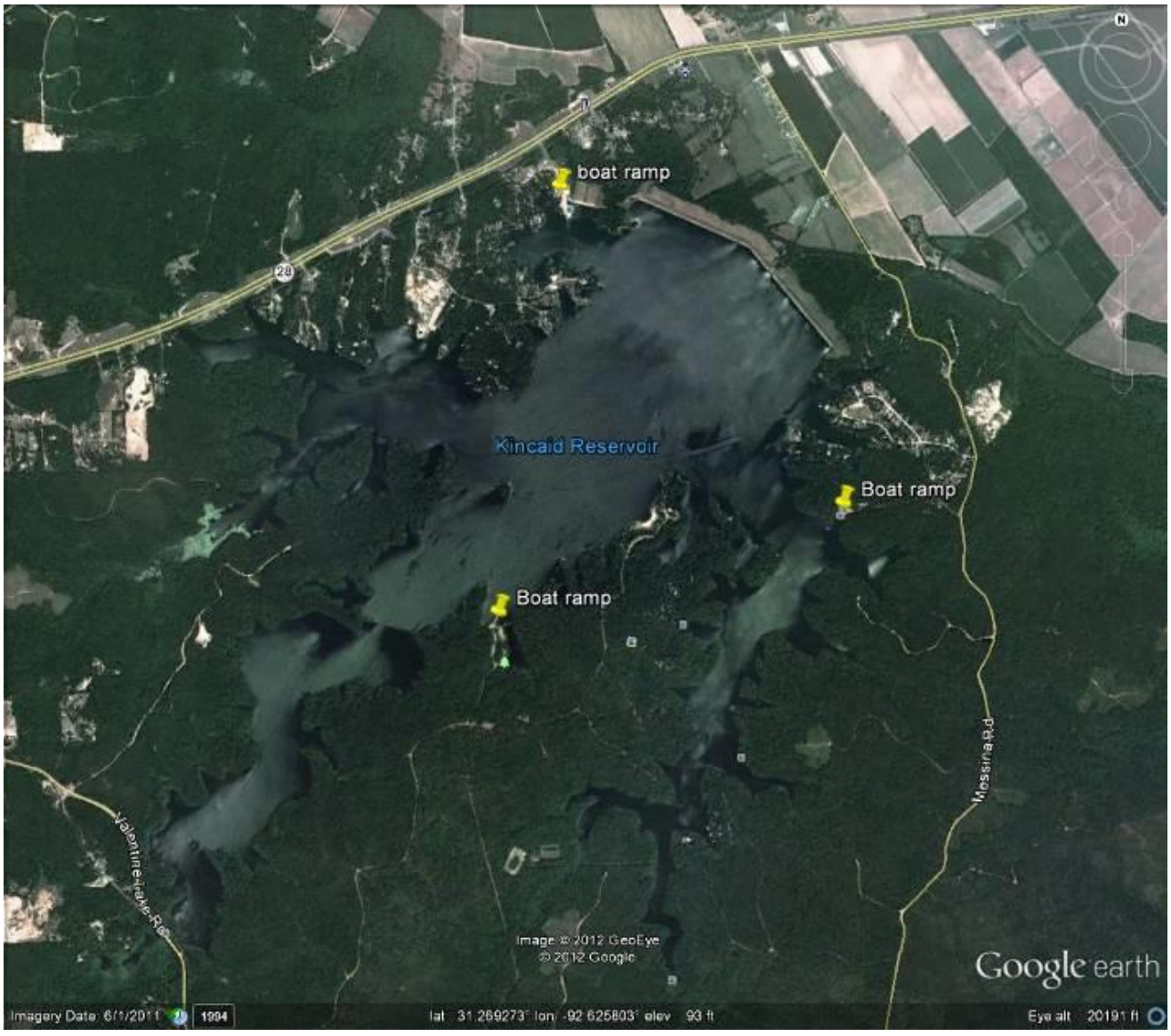


Photo No. 10: View of the discharge channel for drawdown structure.

Appendix II

Map of Kincaid Lake



Typemap

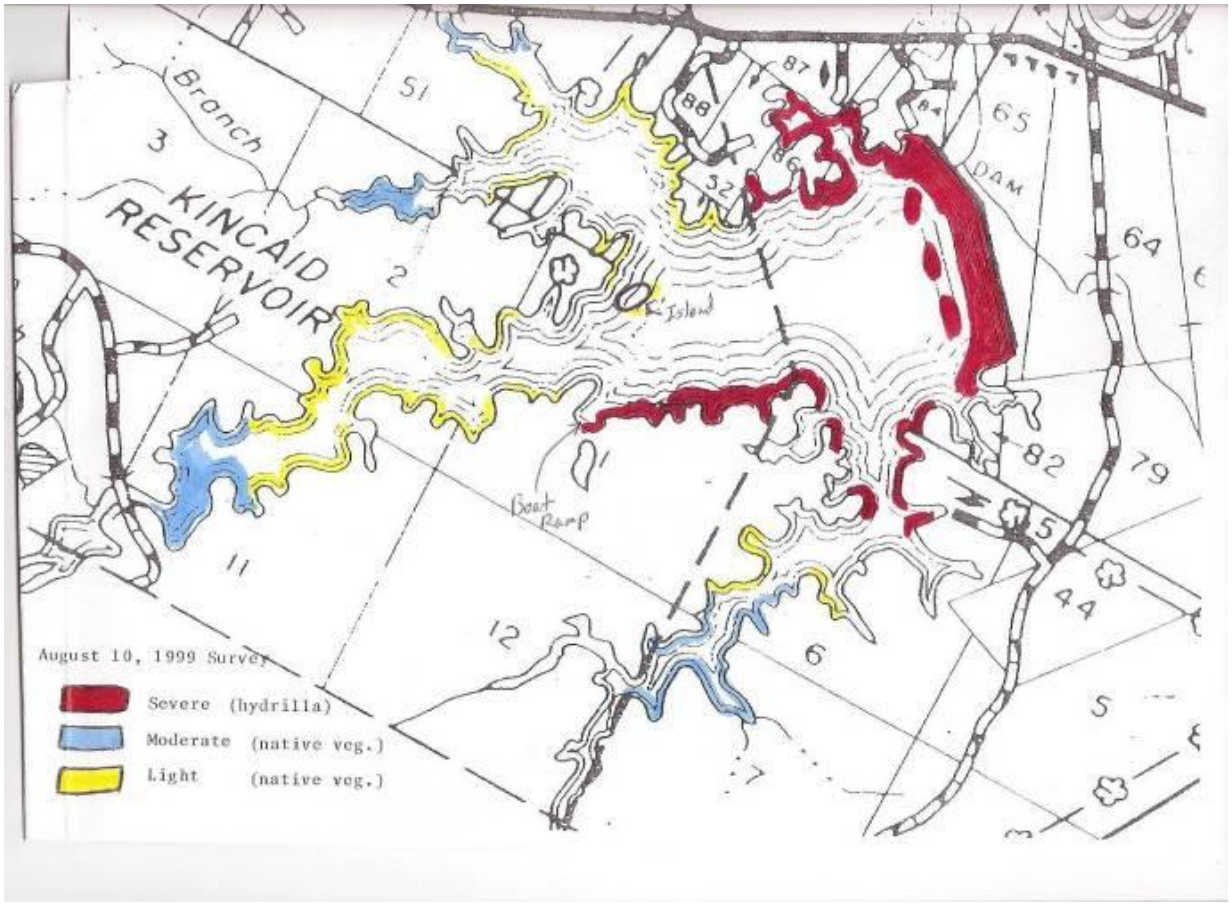
KINCAID LAKE
Aquatic Plant Survey and Assessment
August 10, 1999

Kincaid Lake was surveyed August 10, 1999, to evaluate aquatic weed infestation levels. The weather was sunny with very light winds at 7:00 a.m. The water was clear with several feet of visibility. No algae bloom was present suggesting that most available nutrients were going into the production of aquatic macrophytes.

Hydrilla was the dominant submerged aquatic plant. The hydrilla infestation was largely confined to the eastern 1/3rd of the lake and most abundant near the dam. This area had rooted plants in waters 13 feet deep. "Topped out" plants were found only in waters 8 feet or less in depth. The U.S. Forest Service swimming area and several residences along the northern shoreline were beginning to experience problems with hydrilla. Beds of hydrilla are getting established along the shoreline and public boat launch around Tunk's Cypress Inn. However, considering the entire water surface area of Kincaid lake, only 15 - 20 % is infested with hydrilla. The presence of hydrilla on Kincaid Lake was confirmed in the summer of 1994.

We took random drag samples of vegetation in the Walker branch, Sibley branch, Valentine Creek and Lamotte Creek arms of the lake. These drag samples produced only native vegetation such as coontail, cabomba, bladderwort, and chara. We observed no hydrilla in these areas of the lake. A light to moderate infestation of brasenia, spatterdock, and American lotus was observed along the margins and at the extreme ends of these arms.

While some isolated problems with hydrilla exist, the overall aquatic weed problems were not severe. If hydrilla continues to spread during the next 9 to 12 months, control measures will need to be considered. Spot treatments of hydrilla with herbicides can take care of specific problem sites. Large scale treatment of hydrilla beds with herbicides, however, is usually cost prohibitive. Water level manipulation or grass carp stocking may become necessary if hydrilla growth begins to adversely impact water storage capacity and recreational use of Kincaid Lake.


KINCAID RESERVOIR
Branch
DAM
Island
Boat Ramp
August 10, 1999 Survey
Severe (hydrilla)
Moderate (native veg.)
Light (native veg.)